

**UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF TEXAS
HOUSTON DIVISION**

IN RE: ANADARKO PETROLEUM
CORPORATION SECURITIES
LITIGATION

Case No. 4:20-cv-576

District Judge Charles R. Eskridge III

CLASS ACTION

**APPENDIX OF MATERIALS CITED IN SUPPORT OF DEFENDANTS'
OPPOSITION TO PLAINTIFFS' MOTION TO EXCLUDE CERTAIN
TESTIMONY OF DEFENDANTS' CLASS CERTIFICATION EXPERT
DR. ALLEN FERRELL**

DECLARATION OF KEVIN J. ORSINI
IN SUPPORT OF DEFENDANTS' OPPOSITION TO PLAINTIFFS' MOTION
TO EXCLUDE CERTAIN TESTIMONY OF DEFENDANTS' CLASS
CERTIFICATION EXPERT DR. ALLEN FERRELL

Pursuant to 28 U.S.C. § 1746, I, Kevin J. Orsini, declare as follows:

1. I am a Partner of the law firm Cravath, Swaine & Moore LLP and have been admitted *pro hac vice* as counsel to Defendants Anadarko Petroleum Corporation, R. A. Walker, Robert G. Gwin, Robert P. Daniels, and Ernest A. Leyendecker, III, in the above-captioned action.
2. I respectfully submit this Declaration in support of Defendants' Opposition to Plaintiffs' Motion to Exclude Certain Testimony of Defendants' Class Certification Expert Dr. Allen Ferrell.
3. Submitted with this Declaration as Exhibit A is a true and correct copy of the report of Defendants' expert, Dr. Allen Ferrell, dated September 27, 2024.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on September 27, 2024

/s/ Kevin J. Orsini
Kevin J. Orsini

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Exhibit A:	Report of Defendants' expert, Dr. Allen Ferrell, dated Sept. 27, 2024
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Exhibit A

**IN THE UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF TEXAS
HOUSTON DIVISION**

GEORGIA FIREFIGHTERS' PENSION	:
FUND, Individually and on Behalf of All Others	:
Similarly Situated,	:
	:
	:
	:
Plaintiffs,	:
	:
	:
v.	:
	:
	:
ANADARKO PETROLEUM	:
CORPORATION, R.A. WALKER, ROBERT	:
G. GWIN, ROBERT P. DANIELS, and	:
ERNEST A. LEYENDECKER, III,	:
	:
Defendants.	:
	:

**REPLY REPORT OF ALLEN FERRELL, PH.D.
CONFIDENTIAL
SEPTEMBER 27, 2024**

1. I submitted a report in this matter on December 10, 2021 (“Ferrell Report”) and June 12, 2024 (“Ferrell Sur-Reply Report”).¹

2. On July 12, 2024, Plaintiffs filed a motion to exclude certain of the testimony I provided in opposition to Plaintiffs’ motion for class certification (“Plaintiffs’ Motion”). In that motion, Plaintiffs claim that my event study of ConocoPhillips’ stock price on May 3, 2017, has low “power” and “a Type II error rate of 67% – meaning it is more likely to be wrong than right.”²

3. I have been asked by Cravath, Swaine & Moore LLP, counsel for Defendants, to review and respond to the above claim by Plaintiffs. In performing this work, I have been assisted by Compass Lexecon staff. The materials I have considered are listed in **Appendix B**. As I will document below, this argument is based on a basic misunderstanding of event studies and statistics.

4. The bases for my conclusion are as follows:

5. To start, a single-firm event study, like the ones both I and Plaintiffs’ expert, Mr. Bjorn Steinholt, use in this case, is an event study commonly used by finance and valuation professionals. For example, single-firm event studies are commonly used in peer reviewed finance literature.³ Some recent examples include Almansur, et al. (2020), Assis, et al. (2023), Fdez-Galiano and Feria-Dominguez (2024), Aggrawal and Agarwal (forthcoming).⁴ The two

¹ The Ferrell Report provides information on my qualifications and defines capitalized terms. My updated CV is attached hereto as **Appendix A**.

² Plaintiffs’ Motion, at 16-17.

³ See, e.g., G. Bittlingmayer and T.W. Hazlett, 2000, “DOS Kapital: Has antitrust action against Microsoft created value in the computer industry?,” *Journal of Financial Economics*, Vol. 55, 329-359; G. W. Brown and J.C. Hartzell, 2001, “Market Reaction to Public Information: The Atypical Case of the Boston Celtics,” *Journal of Financial Economics*, Vol. 60, 333-370; B. Cornell and E.R. Sirri, 1992, “The Reaction of Investors and Stock Prices to Insider Trading,” *The Journal of Finance*, Vol. 47, 1031-1059 & R.S. Ruback, 1983, “The Cities Service Takeover: A Case Study,” *The Journal of Finance*, Vol. 38, 319-33.

⁴ See, e.g., A.M. Almansur, W.L. Megginson, and L.V. Pugachev, 2020, “Vertical Integration as An Input Price Hedge: The Case of Delta Air Lines and Trainer Refinery,” *Financial Management*, Vol. 49, 179-206; T.P. Assis, F.F. Cordeiro, and L.C. Schiavon, 2023, “How Stock Market Reacts to Environmental Disasters and Judicial Decisions: A Case Study of Mariana’s Dam Collapse in Brazil,” *International Review of Law and Economics*, Vol. 73, 106105; I.M. Fdez-Galiano and J.M. Feria-Dominguez, 2024, “Do ESG Disclosures Mitigate Investors’ Reaction on Mining Disasters? Evidence from Brazil,” *The Quarterly Review of Economics and Finance*, Vol. 95, 256-267; P. Agrrawal and R. Agarwal, “A Longer-

articles that Plaintiffs cite for the proposition that single-firm event studies can “lack sufficient sample size to be able to accurately detect anything but large impacts on stock prices” – i.e., Brav and Heaton (2015) and Fisch (2018) – were both published in non-peer reviewed law reviews.⁵ And Plaintiffs’ Motion ignores that in the years since those articles were published, peer-reviewed finance literature continues to rely on single-firm event studies.

6. In addition, single-firm event studies are also commonly used in securities cases, as acknowledged in the two articles Plaintiffs cite.⁶ I have said the same in my own writing.⁷ This is also consistent with my experience. Indeed, courts have relied on my opinions based on single-firm event studies. For example, the court in *People of the State of New York v. Exxon Mobil Corporation* noted my opinion about the lack of statistically significant price increase on any alleged misrepresentation date, which I reached based on a single-firm event study, when it concluded that there was no evidence that any misleading statements inflated the price of the subject company’s stock.⁸ In *Ramirez v. Exxon Mobil*, the court noted that “Dr. Ferrell’s analysis of Exxon Mobil’s stock price revealed statistically significant price reactions to at least some of the seven alleged Corrective Disclosures.”⁹

7. Second, Plaintiffs claim that my ConocoPhillips event study has a high “Type II error” and low “power.” A Type II error is when there is a price impact but the event study finds

Term Evaluation of Information Releases by Influential Market Agents and the Semi-Strong Market Efficiency,” *Journal of Behavioral Finance* (forthcoming).

⁵ Plaintiffs’ Motion, at 15-16.

⁶ A. Brav and J.B. Heaton, 2015, “Event Studies in Securities Litigation: Low Power, Confounding Effects, and Bias,” *Washington University Law Review*, Vol. 93, 583-614, at 585 (“After the Supreme Court endorsed the fraud-on-the-market doctrine in *Basic Inc. v. Levinson* in 1988, event studies became so entrenched in securities litigation that they are viewed as necessary in every case.”) & J. Fisch, J. Gelbach, and J. Klick, 2018, “The Logic and Limits of Event Studies in Securities Fraud Litigation,” *Texas Law Review*, Vol. 96, 553-621, at 556 (“Use of the event study methodology has become ubiquitous in securities fraud litigation.”)

⁷ A. Ferrell and A. Saha, 2007, “The Loss Causation Requirement for Rule 10b-5 Causes of Action: The Implications of *Dura Pharmaceuticals, Inc. v. Broudo*,” *Business Lawyer*, Vol. 63, 163-186, at 166 (“Event study analysis is a ubiquitous tool in assessing claims of loss causation as well as the ‘materiality’ of misstatements or fraudulently omitted information.”).

⁸ *People of the State of New York v. Exxon Mobil Corporation*, Supreme Court of the State of New York, New York County, Index No. 452044/2018, December 10, 2019, at 42.

⁹ *Ramirez v. Exxon Mobil Corporation et al.*, U.S.D.C., Northern District of Texas, Dallas Division, Case No. 3:16-cv-031110K, August 21, 2023, at 32.

the abnormal return to be not statistically significant. The “power,” which is equal to one minus the probability of a Type II error, is the probability that the event study will find a statistically significant abnormal return when there is, in fact, a price impact.¹⁰ Therefore, the higher the power of an event study, the lower the Type II error rate, and vice versa. The “power” of an event study depends on the data that is available to be analyzed; it is not something that the person conducting the event study can adjust or control.¹¹

8. Plaintiffs claim that my ConocoPhillips event study has low “power” and is, therefore, unreliable is fundamentally illogical. That claim rests on their assumption that the movement in ConocoPhillips’ stock price on May 3, 2017, was statistically significant. But this argument entirely ignores the direction in which ConocoPhillips’ stock price moved on May 3, 2017. Their claim that Anadarko’s May 2, 2017, afterhours Shenandoah disclosures were corrective disclosures and led to a decline in Anadarko’s stock price would make sense if ConocoPhillips’ stock price on May 3, 2017, also declined. But my event study shows that ConocoPhillips’ stock price increased by 0.71% that date.¹² I found that this increased abnormal return was statistically insignificant. If this increase were, in fact, statistically significant, like Plaintiffs’ claim, it would mean that ConocoPhillips’ stock price *increased* in a meaningful way on May 3, 2017. Because Plaintiffs’ claim relies on a stock price *decrease*, even assuming that my event study failed to detect a statistically significant price movement, that only means that the May 2, 2017, Shenandoah disclosures had a positive price impact, resulting in a statistically significant price *increase* in ConocoPhillips’ stock. My event study does not—and cannot—show that the May 2, 2017, Shenandoah disclosures had a *negative* price impact on ConocoPhillips’ stock; a low “power” cannot make the direction of stock price movement change from positive (showing a price increase) to negative (showing a price decrease). So

¹⁰ See, e.g., W. Greene, 2012, *Econometric Analysis*, 7th ed., Pearson, at 151 (“Type II error: $\beta_2 \neq 0$, but we do not reject the hypothesis. ... One minus the probability of a Type II error is called the power of a test. The power of a test is the probability that it will correctly reject a false null hypothesis. ... The idea of a power of a test relates to [test’s] ability to find what it is looking for.”).

¹¹ See, e.g., W. Greene, 2012, *Econometric Analysis*, 7th ed., Pearson, at 151 (“The power of a test depends on the alternative. It is not under the control of the analyst. To consider the example once again, we are going to reject the hypothesis if $|b_2| > 1$. If β_2 is actually 1.5, then based on the results we’ve seen, we are quite likely to find a value of b_2 that is greater than 1.0. On the other hand, if β_2 is only 0.3, then it does not appear likely that we will observe a sample value greater than 1.0. Thus, again, the power of a test depends on the actual parameters that underlie the data.”).

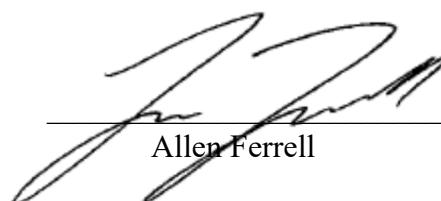
¹² Ferrell Report, Table 3.

Plaintiffs' argument about the power and Type II error rate of my event study does nothing to rebut my conclusion that the May 2, 2017, Shenandoah disclosures had no price impact on Anadarko's stock.

9. Third, Plaintiffs are being disingenuous because they fail to mention that the Anadarko event study that Mr. Steinholt conducted to purportedly control for the May 2, 2017, Firestone news – which was set forth in his Rebuttal Report – is even more affected by this same supposed issue. Specifically, Mr. Steinholt relies on a non-significant Anadarko abnormal return on April 27, 2017 to conclude that his Anadarko “event study now controls for the Firestone issue as it was designed to do.”¹³ But, the power of Mr. Steinholt’s Anadarko event study is 31% and its Type II error rate is 69% – i.e., a lower power and higher Type II error rate than my ConocoPhillips event study.¹⁴ Therefore, Plaintiffs’ claim implies that Mr. Steinholt cannot make the conclusion that his “event study now controls for the Firestone issue as it was designed to do” because Mr. Steinholt’s Anadarko event study would be “more likely to be wrong than right.”

10. Moreover, unlike the *positive* abnormal return of my ConocoPhillips event study (showing a price increase on May 3, 2017, in ConocoPhillips’ stock), the abnormal return of Mr. Steinholt’s Anadarko April 27, 2017 event study is *negative* (showing a price decrease on April 27, 2017, in Anadarko’s stock). This means that, if Mr. Steinholt’s event study had a higher power – and a lower Type II error rate – that could mean that Anadarko’s stock price on April 27, 2017, in fact *did* decrease in a statistically significant way, showing that the Firestone news that was released at that time had a negative price impact on Anadarko’s stock. This would contradict Mr. Steinholt’s conclusion that his event study controlled for the Firestone news.

September 27, 2024



Allen Ferrell

¹³ Steinholt Rebuttal Report dated February 2, 2022, ¶ 45.

¹⁴ Anadarko’s abnormal return on April 27, 2017 was -1.89% and its volatility is 1.31% (= -1.89% abnormal return / -1.45 t-statistic). Steinholt Rebuttal Report dated February 2, 2022, note 106. Based on these parameters, a 5% significance level and 252 observations, the power of Mr. Steinholt’s Anadarko event study is 31% and Type II error is 69%.

Appendix A

August, 2024

Allen Ferrell
Harvard Law School
Cambridge, Massachusetts 02138
Telephone: (617) 495-8961
Email: fferrell@law.harvard.edu

CURRENT POSITIONS

Greenfield Professor of Securities Law, Harvard Law School

Visiting Professor, Stanford Law School

National Bureau of Economic Research, Research Associate

Fellow, Columbia University's Program on the Law and Economics of Capital Markets

Faculty Associate, Kennedy School of Government

Research Associate, European Corporate Governance Institute

EDUCATION

Massachusetts Institute of Technology, Ph.D. in Economics, 2005
Fields in econometrics and finance

Harvard Law School, J.D., 1995, *Magna Cum Laude*

- Recipient of the *Sears Prize* (award given to the two students with the highest grades)
- Editor, *Harvard Law Review*

Brown University, B.A. and M.A., 1992, *Magna Cum Laude*

PREVIOUS POSITIONS

Harvard University Fellow
Harvard Law School, 1997

Law Clerk, Justice Anthony M. Kennedy
Supreme Court of the United States; 1996 Term

*Law Clerk, Honorable Laurence H. Silberman
United States Court of Appeals for the District of Columbia; 1995 Term*

COURSES TAUGHT

*Blockchain & Cryptocurrencies
Corporate Finance
Law and Finance
Securities Litigation & Regulation
Contracts*

REFEREE FOR FOLLOWING JOURNALS

*American Law and Economics Review
Journal of Corporation Finance
Journal of Finance
Journal of Financial Perspectives
Journal of Law and Economics
Journal of Law, Economics and Organization
Journal of Legal Studies
Quarterly Journal of Economics*

CONSULTING AREAS

Price Impact and Securities Damages, Valuation, Mergers & Acquisitions

Papers

“Are Star Law Firms Better Law Firms?” with Manconi, Neretina, Powley & Renneboog, revise and resubmit at the *Journal of Accounting Research* (2024)

“Hidden History of Securities Damages”, 1 University of Chicago Business Law Review 97 (2022)

“How Accurate are Matrix Bond Prices?” with Drew Roper & Yibai Shu, Working Paper (2018)

“New Special Study of the Securities Markets: Intermediaries” with John Morley in SECURITIES MARKET ISSUES FOR THE 21ST CENTURY (2018) (editors Fox, Glosten, Greene and Patel)

“Socially Responsible Firms,” with Hao Liang and Luc Renneboog, 122 *Journal of Financial Economics* 586-606 (2016) (winner of Moskowitz Prize for outstanding quantitative research)

“Price Impact, Materiality, and *Halliburton II*” with Drew Roper, 93 *Washington University Law Review* 553 (2016)

“Introducing the CFGM Corporate Governance Database: Variable Construction and Comparison” with Cremers, Gompers and Andrew Metrick, Working Paper

“The Benefits and Costs of Indices in Empirical Corporate Governance Research,” in OXFORD HANDBOOK ON CORPORATE LAW AND GOVERNANCE (2016)

“Thirty Years of Shareholder Rights and Stock Returns,” with Martijn Cremers, *revise and resubmit Journal of Financial Economics*

“Thirty Years of Shareholder Rights and Firm Valuation,” with Martijn Cremers, 69 *Journal of Finance* 1167 (2014)

“Rethinking Basic,” with Lucian Bebchuk, 69 *Business Lawyer* 671 (2014)

“Calculating Damages in ERISA Litigation,” with Atanu Saha, 1 *Journal of Financial Perspectives* 93 (2013)

“Forward-casting 10b-5 Damages: A Comparison to other Methods”, with Atanu Saha, 37 *Journal of Corporation Law* 365 (2011)

“Event Study Analysis: Correctly Measuring the Dollar Impact of an Event” with Atanu Saha, Working Paper (2011)

“Legal and Economic Issues in Litigation arising from the 2007-2008 Credit Crisis,” with Jennifer Bethel and Gang Hu, in PRUDENT LENDING RESTORED: SECURITIZATION AFTER THE MORTGAGE MELTDOWN (2009)

“Securities Litigation and the Housing Market Downturn,” with Atanu Saha, 35 *Journal of Corporation Law* 97 (2009)

“The Supreme Court’s 2005-2008 Securities Law Trio: *Dura Pharmaceuticals, Tellabs*, and *Stoneridge*,” 9 *Engage* 32 (2009)

“What Matters in Corporate Governance?” with Lucian Bebchuk & Alma Cohen, 22 *Review of Financial Studies* 783 (2009)

“Do Exchanges, CCPs, and CSDs have Market Power?,” in GOVERNANCE OF FINANCIAL MARKET INFRASTRUCTURE INSTITUTIONS (Ruben Lee) (2009)

“An Asymmetric Payoff-Based Explanation of IPO ‘Underpricing’,” Working Paper, with Atanu Saha (2008)

“The Law and Finance of Broker-Dealer Mark-Ups,” commissioned study for NASD using proprietary database (2008)

“Majority Voting” in REPORT OF THE COMMITTEE ON CAPITAL MARKETS REGULATION (2008)

“The Loss Causation Requirement for Rule 10B-5 Causes of Action: The Implications of *Dura Pharmaceuticals v. Broudo*,” with Atanu Saha, 63 BUSINESS LAWYER 163 (2007)

“Mandated Disclosure and Stock Returns: Evidence from the Over-the-Counter Market,” 36 *Journal of Legal Studies* 1 (June, 2007)

“Policy Issues Raised by Structured Products,” with Jennifer Bethel, in BROOKINGS –NOMURA PAPERS IN FINANCIAL SERVICES (2007)

“The Case for Mandatory Disclosure in Securities Regulation around the World,” 2 *Brooklyn Journal of Business Law* 81 (2007)

“U.S. Securities Regulation in a World of Global Exchanges,” with Reena Aggarwal and Jonathan Katz, in EXCHANGES: CHALLENGES AND IMPLICATIONS (2007)

“Shareholder Rights” in REPORT OF THE COMMITTEE ON CAPITAL MARKETS REGULATION (2007)

“Creditor Rights: A U.S. Perspective,” 22 *Angler- und Glaubigerschutz bei Handelsgesellschaften* 49 (2006)

“Measuring the Effects of Mandated Disclosure,” 1 *Berkeley Business Law Journal* 369 (2004)

“If We Understand the Mechanisms, Why Don’t We Understand the Output?”, 37 *Journal of Corporation Law* 503 (2003)

“Why European Takeover Law Matters,” in REFORMING COMPANY AND TAKEOVER LAW IN EUROPE (2003)

“Does the Evidence Favor State Competition in Corporate Law?”, with Alma Cohen & Lucian Bebchuk, 90 *California L. Rev.* 1775 (2002)

“Corporate Charitable Giving,” with Victor Budney, 69 *Univ. Of Chicago Law Review* 1191 (2002)

“A Comment on Electronic versus Floor-Based Securities Trading,” *Journal of Institutional and Theoretical Economics* (Spring 2002)

“Much Ado About Order Flow,” *Regulation Magazine* (Spring 2002)

“On Takeover Law and Regulatory Competition,” with Lucian Bebchuk, 57 *Business Lawyer* 1047 (2002)

“Federal Intervention to Enhance Shareholder Choice,” with Lucian Bebchuk, 87 *Virginia Law Review* 993 (2001)

"A New Approach to Regulatory Competition in Takeover Law," with Lucian Bebchuk, 87 *Virginia Law Review* 111 (2001)

"A Proposal for Solving the 'Payment for Order Flow' Problem," 74 *Southern California Law Review* 1027 (2001)

"Federalism and Takeover Law: The Race to Protect Managers from Takeovers," with Lucian Bebchuk, 99 *Columbia L. Rev.* 1168 (1999)

TESTIMONY LAST FOUR YEARS

Alesco Preferred Funding et al v. ACP re LTD et al, Index Case No. 655881/2017, Expert reports and deposition on August 9, 2024

BLST Northstar v. Santander, Case No. 22-cv-2210, Expert reports and deposition on August 2, 2024

In re P3 Health Group Holdings, LLC, Case No. 2021-0518-JTL, Expert reports and depositions on August 26, 2021 and May 29, 2024

Gelt Trading v. Co-Diagnostics, Case No. 2:20-CV-00368-CMR, Expert report and deposition on March 1, 2024

Homyk v. ChemoCentryx, Case No. 4:21-CV-03343-JST, Expert report and deposition on January 6, 2024

In re Ripple Labs Litigation, Case No. 4:18-CV-06753-PJH, Expert report and deposition on October 16, 2023

Chabot v. Walgreens, Case No. 1:18-CV-02118-CCC-KM, Expert report and deposition on October 6, 2023

XOG Litigation Trust v. Kelley, Case No. 01-22-0002-3114, Expert report and deposition on August 31, 2023 and testimony on October 25, 2023

CRCM v. Getty Images Holdings, Case No. 1:23-CV-01074-JSR, Expert report and deposition on August 14, 2023

Halperin & Davis, Co-Trustees of Appvion Liquidating Trust v. Richards et al., Case No. 17-12082, Expert report and deposition on August 9, 2023

IBM v. GlobalFoundries U.S. Inc., Case Index No. 653625/2021, Expert report and deposition on June 27, 2023

In re Anadarko Petroleum Corporation Securities Litigation, C.A. No. 4:20-CV-00576, Expert report and deposition on March 2, 2023

In Re Madison Square Garden Entertainment Corp. Stockholders Litigation, C.A. No. 2021-0468-KSJM, Expert report and deposition on February 22, 2023

Politan Capital Management v. Masimo Corporation et al., C.A. No. 2022-0948-NAC, Expert report and deposition on February 5, 2023

Restanca v. House of Lithium, C.A. No. 2022-0690-PAF, Expert report and deposition on November 21, 2022 and testimony on December 7, 2022

Roberts et al. v. Zuora, Case No. 3:19-cv-03422-SI, Expert report and testimony on October 25, 2022

United States v. Milton, 21 Crim. 478, Expert testimony on September 30 & October 3, 2022

FSG Services v. Flutter, Ref. No. 1425034540, Expert report and testimony on June 29, 2022

In re Kraft Heinz Securities Litigation, Case No. 1:19-cv-01339, Expert report and deposition on June 23, 2022

Ramirez v. Exxon Mobil Corporation et al., Case No. 3:16-cv-031110K, Expert report and deposition on March 22, 2019 and trial testimony June 7, 2022

SEC v. AT&T Inc. et al., 21 Civ. 1951, Expert report and deposition on April 15, 2022

Securitized Asset Funding 2011-2 v. CIBC, Case Index No. 653911/2015, Expert report and deposition on July 30, 2021 and trial testimony March 18 and 21, 2022

SEC v. Ripple, Case No.20-CV-10832, Expert report and deposition on February 23, 2022

Chabot et al. v. Walgreens, M.D. Pa 1:18-cv-02118, Expert report and deposition on January 18, 2022

EIG Energy Fund v. Keppel Offshore & Marine LTD, Case No.18-cv-01047-PGG, Expert report and deposition on December 9, 2021

Purple Mountain Trust v. Wells Fargo et al., Case No. 3:18-cv-03948-JD, Expert report and deposition on December 3, 2021

In re Robinhood Litigation, Case No. Case No. 3:20-cv-01626-JD, Expert reports and deposition on September 30, 2021

Pearlstein et al. v. Blackberry Limited, Case No. 1:13-cv-7060-CM, Expert report and deposition on November 3, 2020

Appendix B

Materials Considered

Case-Specific Documents

1. *In re Anadarko Petroleum Corporation Securities Litigation*, Plaintiffs' Motion for Leave to File Motion to Exclude Certain Testimony of Defendants' Class Certification Expert Dr. Allen Ferrell, Case 4:20-cv-00576, July 12, 2024

Other Legal Documents

1. *People of the State of New York v. Exxon Mobil Corporation*, Supreme Court of the State of New York, New York County, Index No. 452044/2018, December 10, 2019
2. *Ramirez v. Exxon Mobil Corporation et al.*, U.S.D.C., Northern District of Texas, Dallas Division, Case No. 3:16-cv-031110K, August 21, 2023

Expert Reports

1. Expert Report and Exhibits of Allen Ferrell, Ph.D., December 10, 2021
2. Expert Rebuttal Report and Exhibits of Bjorn I. Steinholt, CFA, February 2, 2022 and backup materials
3. Sur-Reply Report of Allen Ferrell, Ph.D., June 12, 2024

Academic Literature

1. P. Agrawal and R. Agarwal, "A Longer-Term Evaluation of Information Releases by Influential Market Agents and the Semi-Strong Market Efficiency," *Journal of Behavioral Finance* (forthcoming)
2. A.M. Almansur, W.L. Megginson, and L.V. Pugachev, 2020, "Vertical Integration as An Input Price Hedge: The Case of Delta Air Lines and Trainer Refinery," *Financial Management*, Vol. 49, 179-206
3. T.P. Assis, F.F. Cordeiro, and L.C. Schiavon, 2023, "How Stock Market Reacts to Environmental Disasters and Judicial Decisions: A Case Study of Mariana's Dam Collapse in Brazil," *International Review of Law and Economics*, Vol. 73, 106105
4. G. Bittlingmayer and T.W. Hazlett, 2000, "DOS Kapital: Has antitrust action against Microsoft created value in the computer industry?," *Journal of Financial Economics*, Vol. 55, 329-359
5. A. Brav and J.B. Heaton, 2015, "Event Studies in Securities Litigation: Low Power, Confounding Effects, and Bias," *Washington University Law Review*, Vol. 93, 583-614
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8. I.M. Fdez-Galiano and J.M. Feria-Dominguez, 2024, "Do ESG Disclosures Mitigate Investors' Reaction on Mining Disasters? Evidence from Brazil," *The Quarterly Review of Economics and Finance*, Vol. 95, 256-267
9. A. Ferrell and A. Saha, 2007, "The Loss Causation Requirement for Rule 10b-5 Causes of Action: The Implications of Dura Pharmaceuticals, Inc. v. Broudo," *Business Lawyer*, Vol. 63, 163-186
10. J. Fisch, J. Gelbach, and J. Klick, 2018, "The Logic and Limits of Event Studies in Securities Fraud Litigation," *Texas Law Review*, Vol. 96, 553-621
11. W. Greene, 2012, *Econometric Analysis*, 7th ed., (Pearson)
12. R.S. Ruback, 1983, "The Cities Service Takeover: A Case Study," *The Journal of Finance*, Vol. 38, 319-33

All other data and documents referenced in this report.